

Work Order ID 144408

April 15, 2016 1:03:38 PM

144408

Page 1

Item ID: D3278-1 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Support
Start Date: 4/15/2016 Start Qty: 30.00 *30* Cust Item ID:
Required Date: 4/29/2016 Req'd Qty: 30.00 *30* Customer:
Reference:

Approvals: Process Plan: S&H Date: 20160414 Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3278	Rev C								
100	BAND SAW	0.00							
100									
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut blank: 2.00" x 1.00" x 2.550" long								
110	HAAS CNC VERTICAL MACHINING #1	0.68							
110									
HAAS 1	Memo	3.30							
HAAS CNC vertical machine #1	1- Machine as per Folio FA405 and Dwg D32782- Deburr and TumbleIdentify as D3278-1								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.30							
Quality Control									

DAS
44
SW 9-89

16/04/15

16/04/16

16/04/16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			

Root Cause	Pressure/Forced	Temperature/Cure	Power Loss/Surge
Environment ☐	☐	☐	☐
Design ☐	☐	☐	☐
Doc/Data ☐	☐	☐	☐
Equip/Tooling ☐	☐	☐	☐
Handling/Pre ☐	☐	☐	☐
Material ☐	☐	☐	☐
Internal Transport ☐	☐	☐	☐
Tribal Knowledge ☐	☐	☐	☐
LOA ☐	☐	☐	☐
Substation ☐	☐	☐	☐
Past Expiry Date ☐	☐	☐	☐
Misidentified ☐	☐	☐	☐

Root Cause	Bending	Set-up	Folio/Program
No Re-verification ☐	☐	☐	☐
Operator ☐	☐	☐	☐
Offset/Setup ☐	☐	☐	☐
Supplier ☐	☐	☐	☐
Training ☐	☐	☐	☐
Use for Testing ☐	☐	☐	☐
Poor Information ☐	☐	☐	☐
Rushing ☐	☐	☐	☐
Product Improvement ☐	☐	☐	☐
Process Improvement ☐	☐	☐	☐
Manufacturing Process ☐	☐	☐	☐
Past Due ☐	☐	☐	☐

Root Cause	Cracks	Broken/Damage/Defect	Weld
Pressure/Forced ☐	☐	☐	☐
Bending ☐	☐	☐	☐
Centre Not Concentric ☐	☐	☐	☐
Cracks ☐	☐	☐	☐
Crimp/Kink/Ripple/Wave ☐	☐	☐	☐
Cuffs ☐	☐	☐	☐
Crushing ☐	☐	☐	☐
Heat Treat ☐	☐	☐	☐
Wave/Twist in Tube ☐	☐	☐	☐
Marks/Chatter ☐	☐	☐	☐

Root Cause	Countersink	Misaligned/off center	Positioned Wrong
Temperature/Cure ☐	☐	☐	☐
Set-up ☐	☐	☐	☐
BOM/Route ☐	☐	☐	☐
Inspection Incomplete/Unqualified ☐	☐	☐	☐
Contamination ☐	☐	☐	☐
Cut Too Short ☐	☐	☐	☐
Instructions Incomplete/Unclear ☐	☐	☐	☐
Drill Holes ☐	☐	☐	☐

OTHER : _____

Work Order ID 144408

144408

Page 2

April 15, 2016 1:03:38 PM

Item ID: D3278-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Support
 Start Date: 4/15/2016 Start Qty: 30.00 *30* Cust Item ID:
 Required Date: 4/29/2016 Req'd Qty: 30.00 *30* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							DAS 14 9-69
130						30	0		1604/17
QC	Memo	0.60							
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140						30	0		1604/17
HandFinish	Memo	0.30							
Hand Finishing									
150	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
150	M134371	0.00	PO	32310					160509
Powdercoat	Memo	0.00							
Powder Coating									
	START TIME: _____ OVEN TEMPERATURE: _____								
	FINISH TIME: _____								

155
Packaging

Receive & Inspect

SP 16-0510

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				☐ OTHER : _____							

Work Order ID 144408

April 15, 2016 1:03:38 PM

144408

Page 3

Item ID: D3278-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Support
 Start Date: 4/15/2016 Start Qty: 30.00 *30* Cust Item ID:
 Required Date: 4/29/2016 Req'd Qty: 30.00 *30* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							DAS 38 9-89
160									
QC	Memo	0.30							
Quality Control									MAY 1 0 2016
170	Identify as per dwg & Stock Location: _____	0.00							
170									
Packaging	Memo	0.30							
Packaging	LOCATION : GA								
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	3.00							
Quality Control									MAY 1 1 2016

DAS
9-89
MAY 1 0 2016

MCS

MAY 1 1 2016

MCS

MAY 1 1 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____						
Misidentified	☐	Past Due	☐							

Picklist Print

April 15, 2016 1:03:43 PM

Page 1

Work Order ID: 144408

144408

Parent Item: D3278-1

D3278-1

Parent Item Name: Support

Start Date: 4/15/2016

Required Date: 4/29/2016

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP: A04.04.19New issueKJ/JLM
IPP B 07.09.06 rev.c dwg EC verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.000X02.00 0		Purchased		No		100	f	30.3120	0.2337	7.38			

M6061T6B1 000X02 000

6061-T6 Bar 1.00 x 2.00

DAS
44
9-89

16/04/15

Location

Loc Qty

Loc Code

MAT

26.052

M132582

2.052

~~M134514~~

24

MAT003

4.26

M133699

4.26

2.61

41.261

144408

DART AEROSPACE LTD		Work Order: 144408
Description: Support		Part Number: D3278-1
Inspection Dwg: D3278 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.005/-0.000	0.100	✓		MJP-04	vern
0.359	+/-0.005	0.358	✓			
0.609	+/-0.010	0.609	✓			
0.250	+/-0.010	0.250	✓			
1.480	+/-0.005	1.480	✓			
R0.125	+/-0.010	0.125	✓		—	Radius gauge
0.119	+0.005/-0.004	0.119	✓		MJP-04	vern
2.439	+/-0.010	2.441	✓			
1.980	+/-0.010	1.979	✓			
R0.13	+/-0.030	0.130	✓		—	Radius gauge
Ø0.257	+0.005/-0.000	0.260	✓		MJP-04	vern
R0.375	+/-0.010	0.375	✓		—	Radius gauge
0.875	+/-0.010	0.875	✓		MJP-04	vern
0.500	+/-0.010	0.500	✓		...	...
R0.400	+/-0.010	0.400	✓		—	Radius gauge
R1.00	+/-0.030	1.000	✓		...	...
1.720	+/-0.010	1.720	✓		MJP-04	vern
R0.125	+/-0.010	0.125	✓		—	Radius gauge
0.125	+/-0.010	0.126	✓		MJP-04	vern

Measured by: <i>MJP</i>	Audited by: DAS 14 0.00	Prototype Approval:	N/A
Date: 16/04/16	Date: 16/04/16	Date:	N/A

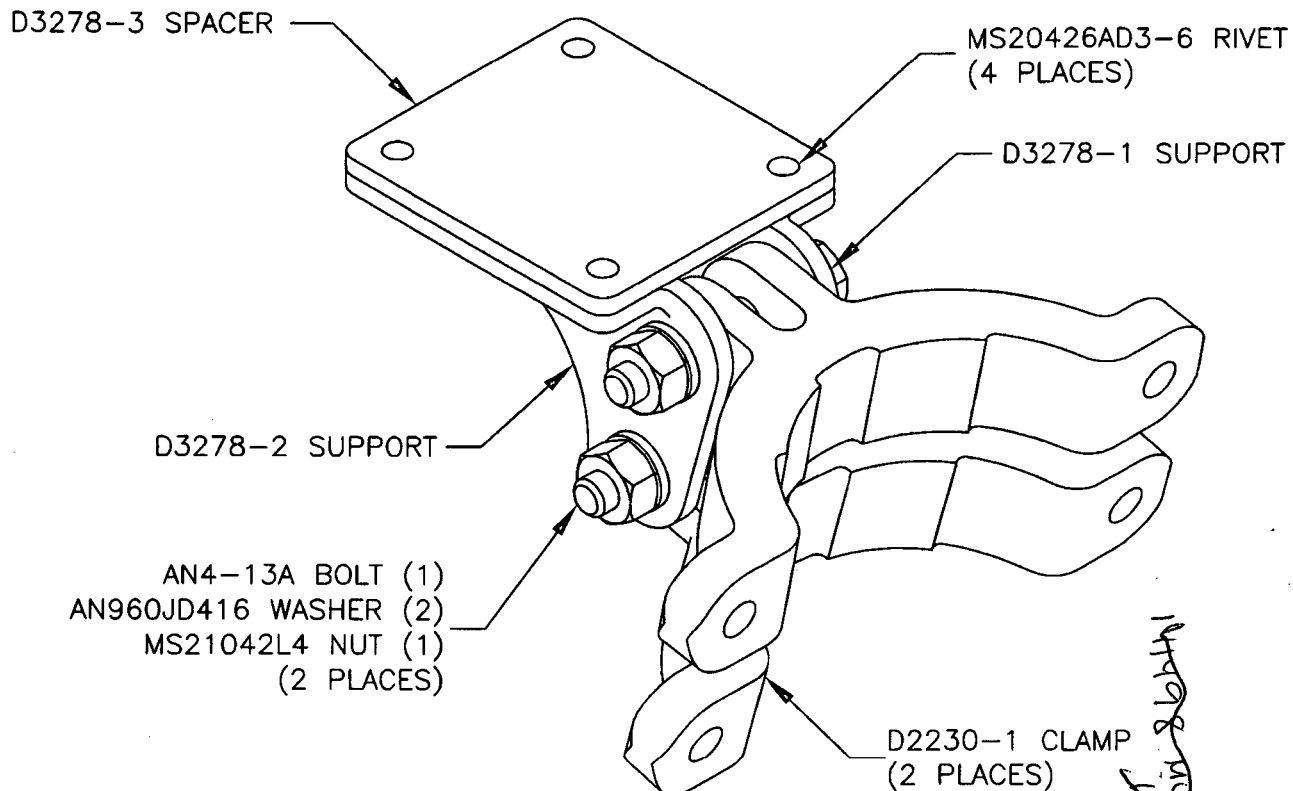
Rev	Date	Change	Revised by	Approved
A	04.04.19	New Issue P/O D3278-041	KJ/JLM	
B	05.06.08	0.359 was 0.365; 0.119 was 0.125	KJ/JLM	
C	07.09.26	Dimensions updated per Dwg Rev. C	KJ/EC	<i>EC</i>



DESIGN <i>97</i>	DRAWN BY <i>DC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>H</i>	DRAWING NO. D3278	REV. C SHEET 1 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE NTS
A	04.03.03	NEW ISSUE	
B	05.03.31	CHANGE DIM/TOL TO ENSURE FIT	
C	07.07.24	CHANGED RIVETS PER PAR #185	

RELEASED
07-08-05

D3278-041 SUPPORT ASSEMBLY



Qty	Part Number	Description
X	D3278-041	SUPPORT ASSEMBLY
2	D2230-1	CLAMP
1	D3278-1	SUPPORT
1	D3278-2	SUPPORT
1	D3278-3	SPACER
2	AN4-13A	BOLT
4	AN960JD416	WASHER
4	MS20426AD3-6	RIVET
2	MS21042L4	NUT

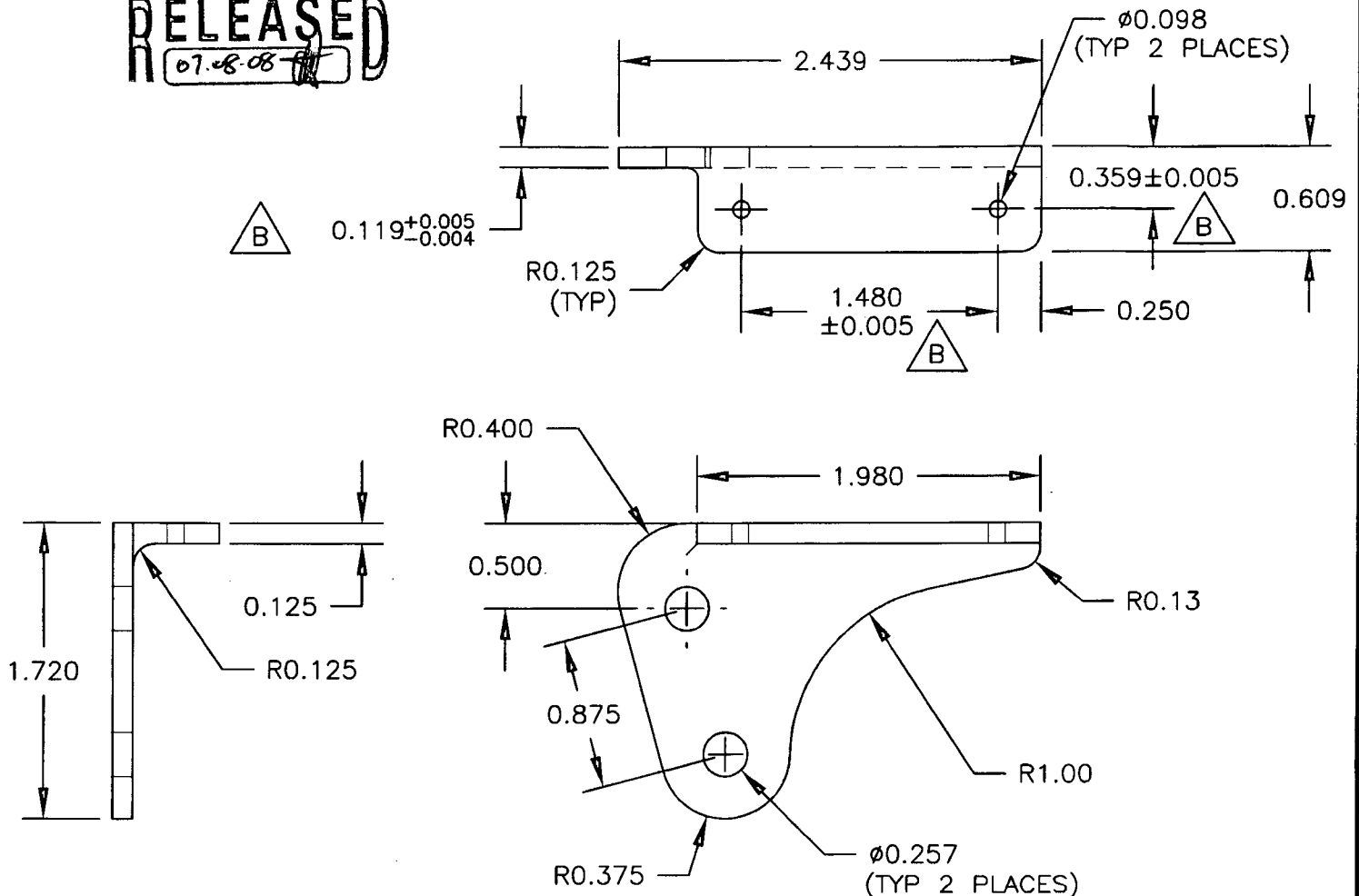
Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <i>GP</i>	DRAWN BY <i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>H</i>	DRAWING NO. D3278	REV. C SHEET 2 OF 3
DATE 07.07.24	TITLE SUPPORT ASSEMBLY		SCALE 1:1

RELEASED
07.08.08



D3278-1 SUPPORT (SHOWN)

D3278-2 SUPPORT (OPPOSITE)

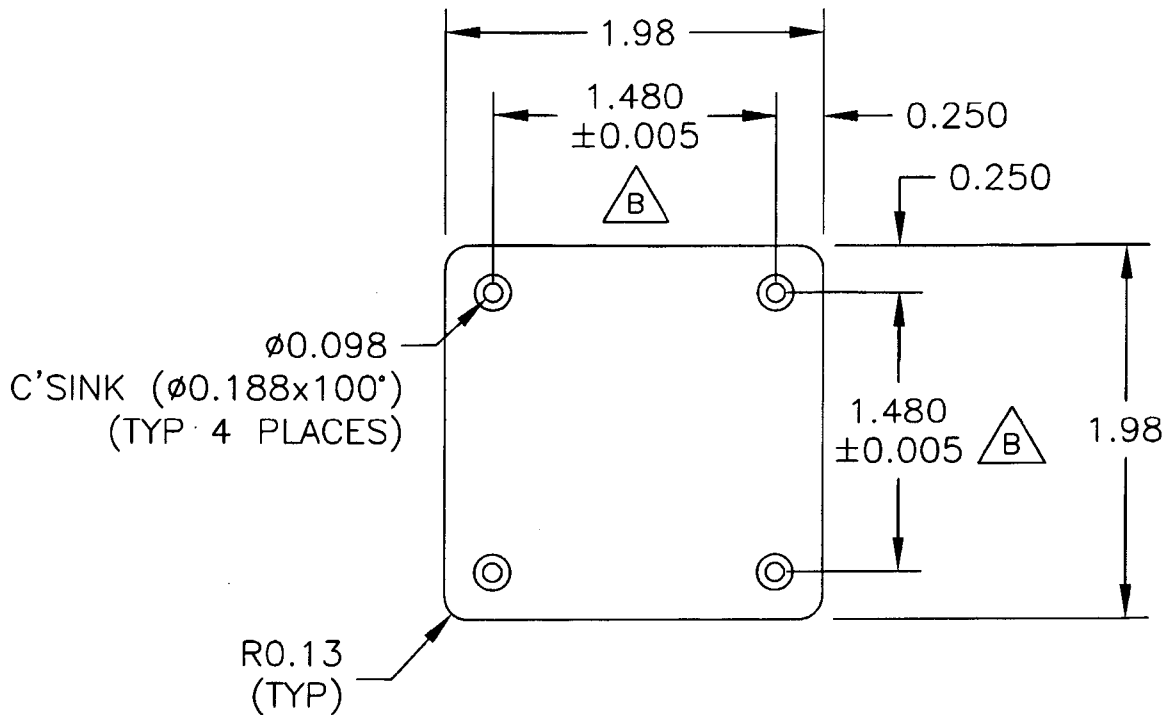
- 1) MACHINE PER DWG FILE "D3278-1.SLDPRT"
- 2) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

DESIGN 97/	DRAWN BY DC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED B	APPROVED [Signature]	DRAWING NO. D3278	REV. C SHEET 3 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE 1:1

RELEASED
07.08.08**D3278-3 SPACER**

- 1) MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL
(REF. DART SPEC. M-DELRIN-B0.125x2.000) OR
DELRIN II 150E OR ACETRON GP ACETAL
(REF. DART SPEC. M-DELRIN-S.125)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32310

Purchase Order Date 5/9/2016

PO Print Date 5/10/2016

Page Number 3 of 5

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

VENDOR'S TRUCK

Buyer

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

7	144408	Powder coat per QSI005	5/11/2016 No 5/11/2016	30.00	\$2.00	\$60.00
Line Total:						\$60.00
8	142908	Powder coat per QSI005	5/11/2016 No 5/11/2016	40.00	\$2.00	\$80.00
Line Total:						\$80.00
9	144622	Powder coat per QSI005	5/11/2016 No 5/11/2016	9.00	\$3.00	\$27.00
Line Total:						\$27.00
10	142717	Powder coat per QSI005	5/11/2016 No 5/11/2016	8.00	\$6.00	\$48.00

PO Instructions: admin fee included in unit price.

Note:

5/10/2016

Generic Quote Calculator - quoted by: Roger L

Line	Part Number	Qty	Requirement 1	Unit Cost	Req 2	Unit Cost
1	142873	36	powder coated	\$4.00		\$0.00
2	144557	15	powder coated	\$4.00		\$0.00
3	142917	6	powder coated	\$15.00		\$0.00
4	142869	142	powder coated	\$2.00		\$0.00
5	142456	79	powder coated	\$2.00		\$0.00
6	143415	20	powder coated	\$4.00		\$0.00
7	144408	30	powder coated	\$2.00		\$0.00
8	142908	40	powder coated	\$2.00		\$0.00
9	144622	9	powder coated	\$3.00		\$0.00
10	142717	8	powder coated	\$6.00		\$0.00
11	139536	18	powder coated	\$6.00		\$0.00
12	142776	22	powder coated	\$6.00		\$0.00
13	142721	4	powder coated	\$6.00		\$0.00
14	Adminastration fee	1		\$125.00		\$0.00
15				\$0.00		\$0.00
16				\$0.00		\$0.00
17				\$0.00		\$0.00
18				\$0.00		\$0.00
Repeat Job		YES	NO	Black Ano	\$125	Color Ano \$150.00
Lot Charges		Paint	\$185	Clear Ano	\$125	Hard Ano \$175
COMMENT		PO32310				
Pricing is based on lot charges when possible						
Anodize Pricing is based on how many parts can be processed per hour - when excee						
Painting Pricing is based on how many parts can be processed per hour - when excee						

SP/6-05-10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

[illegible]

8816-05-10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							